

20-8120



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

647.3914

Job Sheet 204806



Part No: 647.3914

Job Qty: 10 pcs

Part Name: Breakaway Tip, Long



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 12/20/19

Job Tracking No:

Due Date: 2/24/20

Created By: Jennifer Renwick

Type: Stock

Description:

Note: DWG REV C2 SHEETS 1,4,9 IPP REV. A NEW ISSUE JFS 14/06/19 VERIFIED BY: DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier	Sign-off
					Setup	Run		
					Hrs	Hrs	Workcenter / Supplier Lead Time	
100	Bandsaw - 1	10 pcs	2/24/20	2/24/20	0.00	8.19	Bandsaw - 1	525 20/03/11
110	HAAS 4 Axis - B4B	10 pcs	2/24/20	2/24/20	0.19	8.19	HAAS - 1 - B4B	9-89 20/03/11
							HAAS - 2 - B4B	
							HAAS - 3 - B4B	
							HAAS - 4 - B4B	
120	QC 2	10 pcs	2/24/20	2/24/20	0.00	0.00	QC 2 - 1	
							QC 2 - 12	
							QC 2 - 14	
							QC 2 - 17	
							QC 2 - 19	
							QC 2 - 2	
							QC 2 - 20	
							QC 2 - 22	
							QC 2 - 23	
							QC 2 - 25	
							QC 2 - 32	
							QC 2 - 33	
							QC 2 - 35	
							QC 2 - 39	
							QC 2 - 4	
							QC 2 - 40	
							QC 2 - 44	
							QC 2 - 45	
							QC 2 - 48	
							QC 2 - 49	
							QC 2 - 50	
							QC 2 - 51	DAS
							QC 2 - 52	52 20/03/11
							QC 2 - 57	9-89
							QC 2 - 62	
							QC 2 - 63	



Container No: S262876



Part: 647.3914

Job No: 204806

Serial No/Batch: S262876

Revision:

Inspector:

Exp Date:

Instructions: Various STC's

Date: 03/11/20

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Plex 12/20/19 8:28 AM Dart.Renwick.Jennifer

P.T.O.

					QC 2 - 8	
					QC 2 - 66	
					QC 2 - 64	
					QC 2 - 65	
					QC 2 - 5	
					QC 2 - 71	
					QC 2 - 73	
					QC 2 - 69	
130	QC 8	10 pcs	2/24/20	0.00 0.00	QC 8 - 12	
					QC 8 - 14	OK 20/03/11
					QC 8 - 17	
					QC 8 - 20	
					QC 8 - 25	
					QC 8 - 3	
					QC 8 - 32	
					QC 8 - 33	
					QC 8 - 35	
					QC 8 - 39	
					QC 8 - 4	
					QC 8 - 44	
					QC 8 - 45	
					QC 8 - 49	
					QC 8 - 58	
					QC 8 - 8	
					QC 8 - 9	
					QC 8 - 68	
					QC 8 - 67	
					QC 8 - 1 (A)	
					QC 8 - 47	
					QC 8 - 40	
					QC 8 - 52	
					QC 8 - 23	
					QC 8 - 57	
					QC 8 - 76	
					QC 8 - 61	
140	Outsource - 4 - Anodize	10 pcs	2/24/20		ATG001-VC	8 2020-03-16
150	Packaging 2-1 - Receive - B4B	10 pcs	2/24/20	0.00 0.00	Packaging 2 - 1 - B4B	
					Packaging 2 - 2 - B4B	
					Packaging 2 - 3 - B4B	
					Packaging 2 - 5 - B4B	APR 02 2020
					Packaging 2 - 4 - B4B	
					Packaging 2 - 6 - B4B	
					Packaging 2 - 7 - B4B	
					Packaging 2 - 8 - B4B	
					Packaging 2 - 9 - B4B	
					Packaging 2 - 10 - B4B	
					Packaging 2 - 11 - B4B	
					Packaging 2 - 12 - B4B	
					Packaging 2 - 13 - B4B	
					Packaging 2 - 14 - B4B	
					Packaging 2 - 15 - B4B	
					Packaging 2 - 16 - B4B	
					Packaging 2 - 17 - B4B	
					Packaging 2 - 18 - B4B	
					Packaging 2 - 19 - B4B	
					Packaging 2 - 20 - B4B	
					Packaging 2 - 21 - B4B	
					Packaging 2 - 22 - B4B	
					Packaging 2 - 23 - B4B	

				Packaging 2 - 24 - B4B	
				Packaging 2 - 25 - B4B	
				Packaging 2 - 26 - B4B	
				Packaging 2 - 27 - B4B	
				Packaging 2 - 28 - B4B	
				Packaging 2 - 29 - B4B	
				Packaging 2 - 30 - B4B	
				Packaging 2 - 31 - B4B	
				Packaging 2 - 32 - B4B	
				Packaging 2 - 33 - B4B	
				Packaging 2 - 34 - B4B	
				Packaging 2 - 35 - B4B	
				Packaging 2 - 36 - B4B	
				Packaging 2 - 37 - B4B	
155 QC 6	10 pcs	2/24/20	0.00 0.00	QC 6 - 9	
				QC 6 - 68	
				QC 6 - 61	
				QC 6 - 40	
				QC 6 - 81	
180 Packaging 3-1 - Stock - B4B	10 pcs 20 Pcs	2/24/20	0.00 0.00	Packaging 3 - 1 - B4B	
				Packaging 3 - 2 - B4B	
				Packaging 3 - 3 - B4B ✓	
				Packaging 3 - 4 - B4B	
				Packaging 3 - 5 - B4B	
				Packaging 3 - 6 - B4B	
				Packaging 3 - 7 - B4B	
				Packaging 3 - 8 - B4B	
				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
				Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
				Packaging 3 - 37 - B4B	
190 QC 21 - SA	10 pcs	2/24/20	0.00 0.00	QC 21 - SA - 21	
				QC 21 - SA - 70	
				QC 21 - SA - 53	

DAS
40
9-09

APR 27 2020

DAS
80
9-09

APR 28 2020

DAS

21

9-09

APR 28 2020

Part Op 100 - (Bandsaw) Cut Blank at 14.500"

Descriptions: 110 - (HAAS CNC Vertical Machine) 1-Machine per folio FB315

120 - (QC2- Inspect parts off machine FAI/FAIB)

130 - (QC8- Inspect parts - second check)

140 - Outsource4 (Outsource process-Anodize per QSI017 4.1.10.1) Issue P/O to ATG: 46107

150 - (Receive & Inspect for Damage & Mat'l Certs)

155 - (QC6- All purchased or subcontracted products)

180 - ***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***

190 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M7075T6S2.000X0.750	7075-T6S Sheet 2" Thick Plate X 0.75" Wide	12.0900 ft (1.209 ea)	100-Bandsaw - 1	5255557 x 9 5257012 x 8 5173629 x 2 5246097 x 1

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Bandsaw - 1	M7075T6S2.000X0.750	12	19	0

Part Specifications

Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Breakaway Tip Long	0.189inches + 0.005 - 0.001	0.194 0.188	0.189	diameter
2	Breakaway Tip Long	0.194inches + 0.005 - 0.001	0.199 0.193	0.194	diameter
3	Breakaway Tip Long	8.611inches ± 0.005	8.616 8.606	8.611	
4	Breakaway Tip Long	7.876inches ± 0.005	7.881 7.871	7.880	
5	Breakaway Tip Long	1.224inches ± 0.005	1.229 1.219	1.223	
6	Breakaway Tip Long	0.252inches ± 0.005	0.257 0.247	0.252	
7	Breakaway Tip Long	42.830degrees ± 0.500	43.330 42.330	42.8	angle
8	Breakaway Tip Long	37.100degrees ± 0.500	37.600 36.600	37.1	angle
9	Breakaway Tip Long	0.533inches ± 0.005	0.538 0.528	0.537	
10	Breakaway Tip Long	0.560inches ± 0.005	0.565 0.555	0.566	
11	Breakaway Tip Long	0.362inches + 0.002 - 0.000	0.364 0.362	0.363	
12	Breakaway Tip Long	0.910inches ± 0.005	0.915 0.905	0.910	
13	Breakaway Tip Long	0.063inches ± 0.005	0.068 0.058	0.063	Radius
14	Breakaway Tip Long	8.618inches ± 0.005	8.623 8.613	8.618	
15	Breakaway Tip Long	0.740inches ± 0.005	0.745 0.735	0.745	
16	Breakaway Tip Long	0.306inches ± 0.005	0.311 0.301	0.305	
17	Breakaway Tip Long	2.306inches ± 0.005	2.311 2.301	2.306	
18	Breakaway Tip Long	1.556inches ± 0.005	1.561 1.551	1.556	
19	Breakaway Tip Long	0.418inches ± 0.005	0.423 0.413	0.417	
20	Breakaway Tip Long	0.175inches ± 0.005	0.180 0.170	0.175	
21	Breakaway Tip Long	45.000degrees ± 0.500	45.500 44.500	45	angle

Plex 12/20/19 8:28 AM Dart.Renwick.Jennifer



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **POHB046107**



Supplier: ATG001-VC
A.T.G. Industries Inc
760 INDUSTRIELLE STREET
ROCKLAND
ON
K4K 1T2 Canada
Phone: 613-446-4544
Fax: 613-446-4556

Attention: Lalande, Marc-Andre

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: POHB046107

PO Date: 3/16/20

Due Date: 3/30/20

Purchase Order

Revision:

Revision Date:

Issued By:

Guerin, Kimberley
Phone: 613-632-5200 Ext: 298
kguerin@dartaero.com

Via: Ground

Pynt Terms: Net 60

Freight Terms:

Special Comments:

E-MAILED
2020-03-26

Items

Line Item	Job	Part	Drawing	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	205052	646.9713	646.9700 Rev H	Body Issue P/O to ATG Anodize, Color Black, Prime as per Dwg 646.9700	Firmed X12	-	3/30/20	20 pcs	0 pcs	20 pcs	\$16.08/pcs	\$321.60
2	207119	D4726-1	D4726 Rev B	Handle : Various STC's Outsource4 (Outsource process-Anodize per QSI017 4.1.10.1)	Firmed X12	-	3/30/20	12 pcs	0 pcs	12 pcs	\$4.28/pcs	\$51.36
3	206659	646.9710	646.9700 Rev H	Body : Various STC's (Outsource process-Anodize per QSI017 4.1.10.1), Issue P/O to: Hard Black Anodize Color Black and Prime as per Dwg 646.9700	Firmed X12	-	3/30/20	12 pcs	0 pcs	12 pcs	\$9.08/pcs	\$108.96



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB046107



Items

Line Item	Job	Part	Drawing	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
4	207949	RBEL135M-2905-101-03	RBEL135M-2905-101 Rev 9	Bottom Cover Outsource process-Anodize per QSI017 4.1.10.1 Issue P/O to Groupe Altech; PO -ANODIZE COLOR CLEAR, PER IAW MIL-A-8625F TYPE 2 CLASS 1, Water sealant -Certificate of Conformity is required	Firmed X5	-	3/30/20	5 pcs	0 pcs	5 pcs	\$9.91/pcs	\$49.55
									MAR 26 2020			
5	207892	C45-1-1	C45-1-1 Rev 3	Manual Knob Release (Outsource process-Anodize per QSI017 4.1.10.1) -Issue PO -ANODIZE COLOR RED, PER IAW MIL-A-8625 TYPE-2 CLASS-2, Water sealant -Material type; 6061 -Certificate of Conformity is required As Per DWG C45-1-1	Firmed X10	-	3/30/20	10 pcs	0 pcs	10 pcs	\$9.91/pcs	\$99.10
6	204806	647.3914	647.3900 Rev C2	Breakaway Tip, Long : Various STC's Outsource4 (Outsource process-Anodize per QSI017 4.1.10.1) Issue P/O to ATG	Firmed X20	-	3/30/20	20 pcs	0 pcs	20 pcs	\$13.13/pcs	\$262.60
									APR 02 2020			
Grand Total:												\$893.17

Guerin



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER
POHB046107



Order Notes

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 3/26/20 10:13 AM Dart.Guerin.Kimberley



A.T.G. Industries Inc.
760 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 919913

Date: 01-Apr-20

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Kimberley Guerin
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
		ATG Delivery	
Quantity	Description		
	Please reference this document's Pack List number on all correspondences regarding this shipment. If you have any questions, please contact us.		
20 ea	Part: 647.3914 Breakaway Tip Hard Black Anodize per MIL-A-8625F, Type III, Class2, .0005-.0045" (.5 - 4.5mils) Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .006-.0009" (1.2 mils) per drawing Batch/Lot#: S236137 Job: 27158 PO: POHB046107	Rev: C Expiry Date: 05/29/21 Line: 6	DA: 40 9-89
CERTIFICATE OF CONFORMANCE A.T.G Industries Inc. certifies that all items in this shipment conform to the requirements. Date: <u>APR 01 2020</u> Certified Signature: _____ Receiver Signature: _____ A.T.G Industries Inc. is AS9100 Registered and Nadcap Chemical Processing Accredited. Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt.			

RECEIVED
APR 02 2020
DART AEROSPACE LTD.

Made in Canada.

Entered: JR Date: June 12/2020



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. 20-8120

Route update only ☐

Job: <u>304806</u> Part No. <u>647.3914</u>		DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐		DEPARTMENT/PROCESS Skid-tube ☐ Cross tube ☐ Machining ☒ Small Fab ☐ Large Fab ☐ Finishing ☐				Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐		Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐																													
Date: <u>20/03/11</u>		Sequence #: <u>110</u>		QTY Affected: <u>1</u>				MRB (QSI042)																															
Description Work Order Deviation				Disposition				DAS 9 9-89 <u>20-04-27</u> Completed By DAS 52 20/03/11 9-89 Lead hand / Supervisor <u>JK</u> <u>20/03/11</u> QC / QA Coordinator DAS 9 9-89 <u>20-04-27</u>																															
Machined part # 647.3913 instead of 647.3914				Scrap and replace																																			
Root Cause Operator ☒ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY <table border="0"> <tr> <td>☐ Pressure/Forced</td> <td>☐ Contamination</td> <td>☐ Power Loss/Surge</td> <td>☐ Positioned Wrong</td> </tr> <tr> <td>☐ Bending</td> <td>☐ Misaligned/off center</td> <td>☒ Folio/Program</td> <td>☐ Outside Tolerance</td> </tr> <tr> <td>☐ Crushing</td> <td>☐ BOM/Route</td> <td>☐ Grain Direction</td> <td>☐ Drawing</td> </tr> <tr> <td>☐ Cracks</td> <td>☐ Broken/Damage/Defect</td> <td>☐ Weld</td> <td>☐ Finish</td> </tr> <tr> <td>☐ Crimp/Kink/Ripple/Wave/Twist</td> <td>☐ Incomplete/Unclear Instructions</td> <td>☐ Wrong Stock Pulled</td> <td>☐ Part Lost/Missing</td> </tr> <tr> <td>☐ Marks/Chatter</td> <td>☐ Drill Holes</td> <td>☐ Out of Sequence</td> <td>☐ Misread</td> </tr> <tr> <td>☐ Mislabeled</td> <td>☐ Fit/Function</td> <td>☐ Off-set/Set-up</td> <td></td> </tr> </table>										☐ Pressure/Forced	☐ Contamination	☐ Power Loss/Surge	☐ Positioned Wrong	☐ Bending	☐ Misaligned/off center	☒ Folio/Program	☐ Outside Tolerance	☐ Crushing	☐ BOM/Route	☐ Grain Direction	☐ Drawing	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Finish	☐ Crimp/Kink/Ripple/Wave/Twist	☐ Incomplete/Unclear Instructions	☐ Wrong Stock Pulled	☐ Part Lost/Missing	☐ Marks/Chatter	☐ Drill Holes	☐ Out of Sequence	☐ Misread	☐ Mislabeled	☐ Fit/Function	☐ Off-set/Set-up	
☐ Pressure/Forced	☐ Contamination	☐ Power Loss/Surge	☐ Positioned Wrong																																				
☐ Bending	☐ Misaligned/off center	☒ Folio/Program	☐ Outside Tolerance																																				
☐ Crushing	☐ BOM/Route	☐ Grain Direction	☐ Drawing																																				
☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Finish																																				
☐ Crimp/Kink/Ripple/Wave/Twist	☐ Incomplete/Unclear Instructions	☐ Wrong Stock Pulled	☐ Part Lost/Missing																																				
☐ Marks/Chatter	☐ Drill Holes	☐ Out of Sequence	☐ Misread																																				
☐ Mislabeled	☐ Fit/Function	☐ Off-set/Set-up																																					
		Other/Details: <u>operator chose wrong prog.</u>																																					